

ABSTRACT

Bali is the tour area which famous in Indonesia and in the world. The Bali island has many enjoting tourist objects visited by tourists. Beside that, world's meeting usually held in Bali, so each country's envoys need high data access to send information for their own country quickly. Nowadays, in Bali especially the South Bali area which becoming the Bali artery needed telecommunications technology that was more modern in supporting the tourism progress,for the tourists and also for the Balinese community that acted as the perpetrators of tourism. To satisfy this requirement need a network planning that can satisfy the requirement for the South Bali area which has a fast developing in internet access. Technology WiMAX (Worldwide Interoperability for Microwave Access) is one of the nirkabel technology that provided a basis for WAB (Wireless Access Broadband) to provide the broadband service have a speed high was based on the IEEE 802,16 standard. WiMAX could make use for various applications; for example the application of backhaul, broadband access,and personal broadband.

In the end task will make the network of technology WiMAX with the IEEE 802.16e standard in the south Bali area (covered 3 regencies and 1 municipality) by counting various aspects those are mapping the location, the propagation modeling, link budget, the network capacity planning, estimation of the requirement bandwidth, the bandwidth availability in each sector, cell radius,dan the number of cells.

After being made out WiMAX network planning in 3 regencies and 1 municipality (shared for two areas; urban and suburban area) that has 1753.24 km² total area need 105 WiMAX cells; 44 the cell in urban area and 61 cells in suburban area that used 3-sectors antennae with the radius of the urban area is 1.77 km and the radius of the cell of the suburban area is 3.06 km. To facilitated the mapping and visualisation used MapInfo Profesional 8.0 with the drafting of the location of antennae in accordance with the existing.

Keyword: WiMAX,Broadband, Bandwidth, Propagation